DARPA
Charging Ahead into the Next Millennium
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ISO

Advanced Logistics Project

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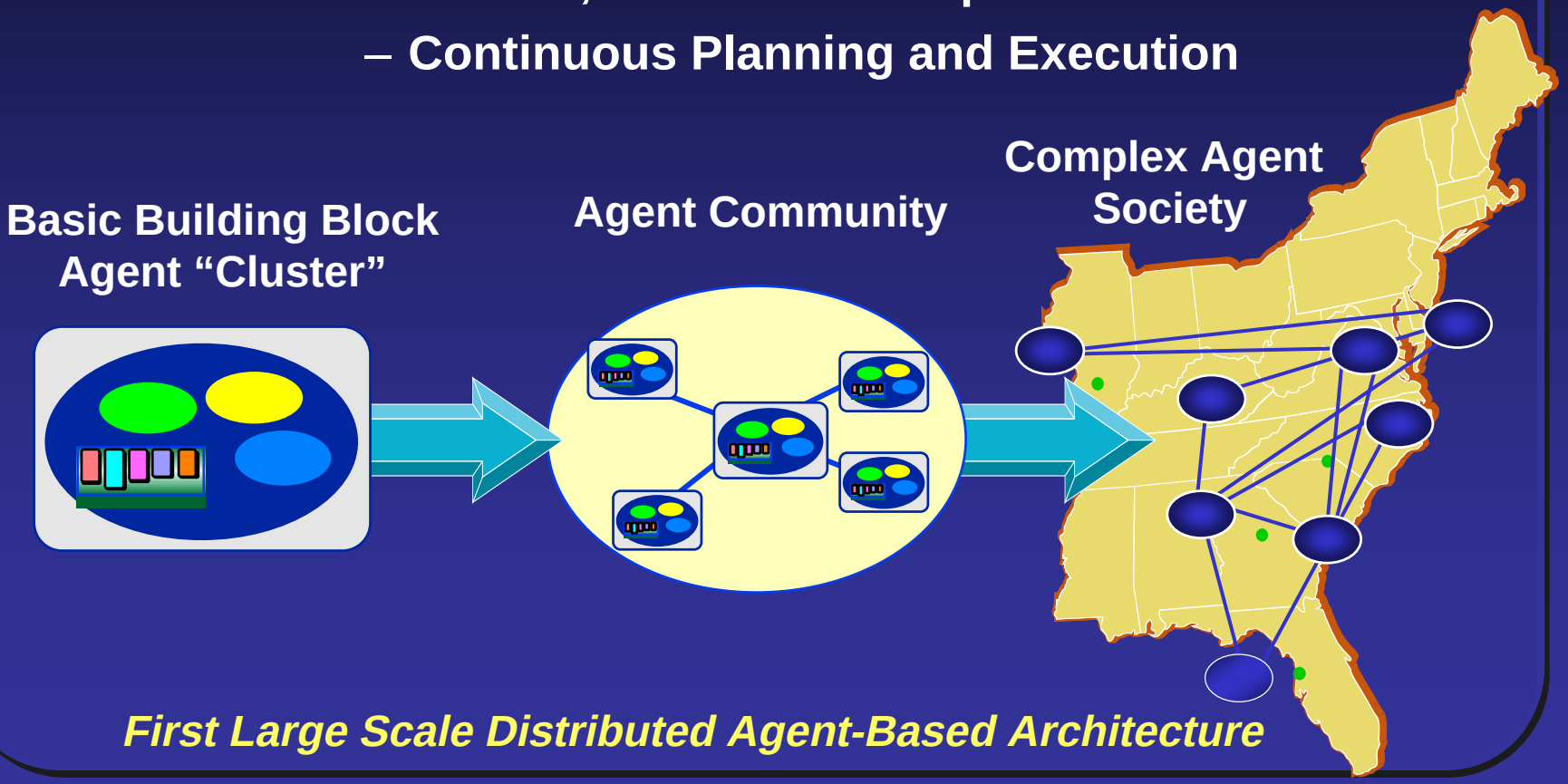
Advanced Logistics Project

ISO

Getting Control of the Logistics Pipeline...

- ~~Planning, Managing, and Providing Visibility~~
- All Echelons, All Phases of Operations
- Continuous Planning and Execution



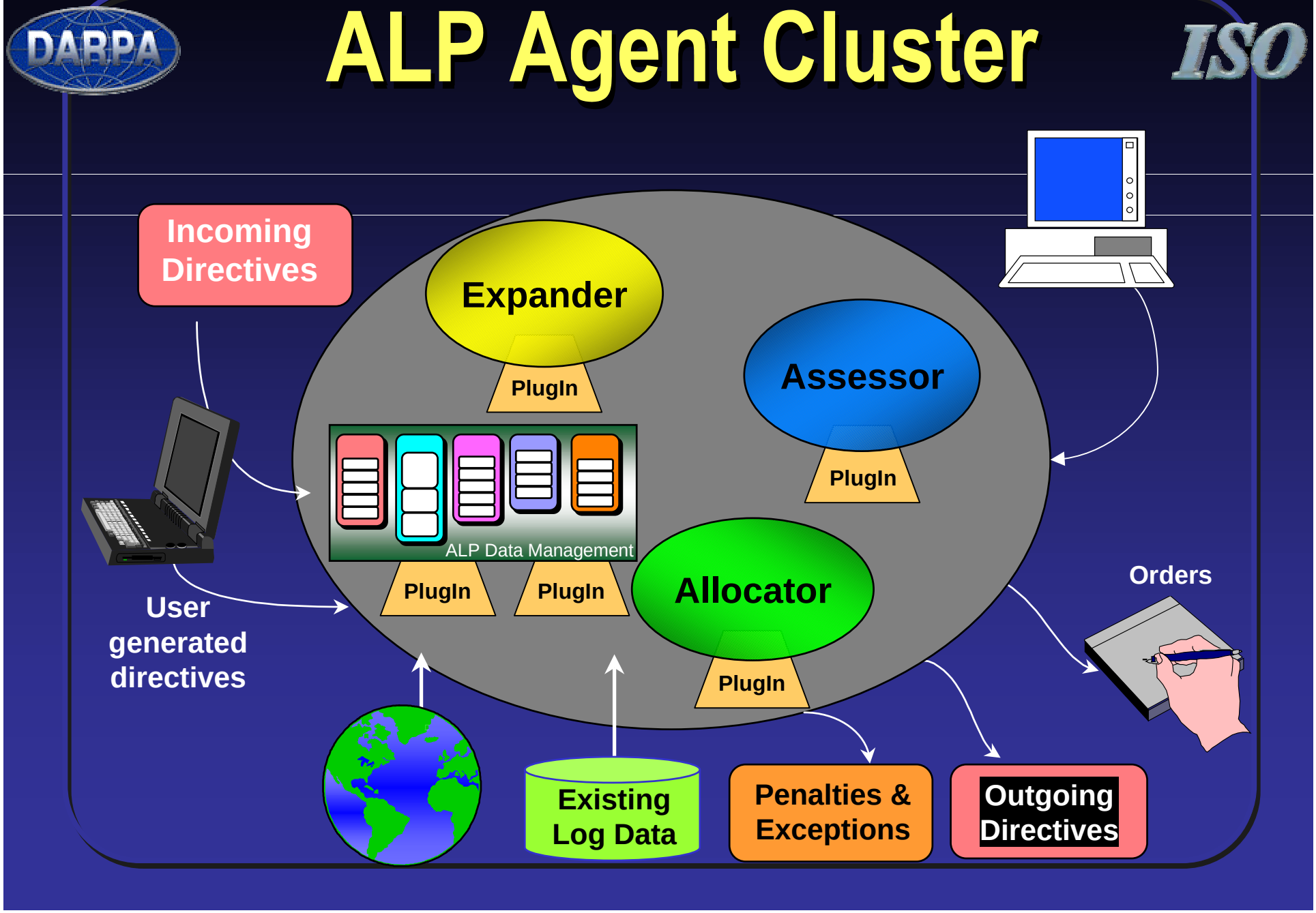
First Large Scale Distributed Agent-Based Architecture

ALP Operational Vision

Rapid Planning | Execution Monitoring | Continuous Replanning

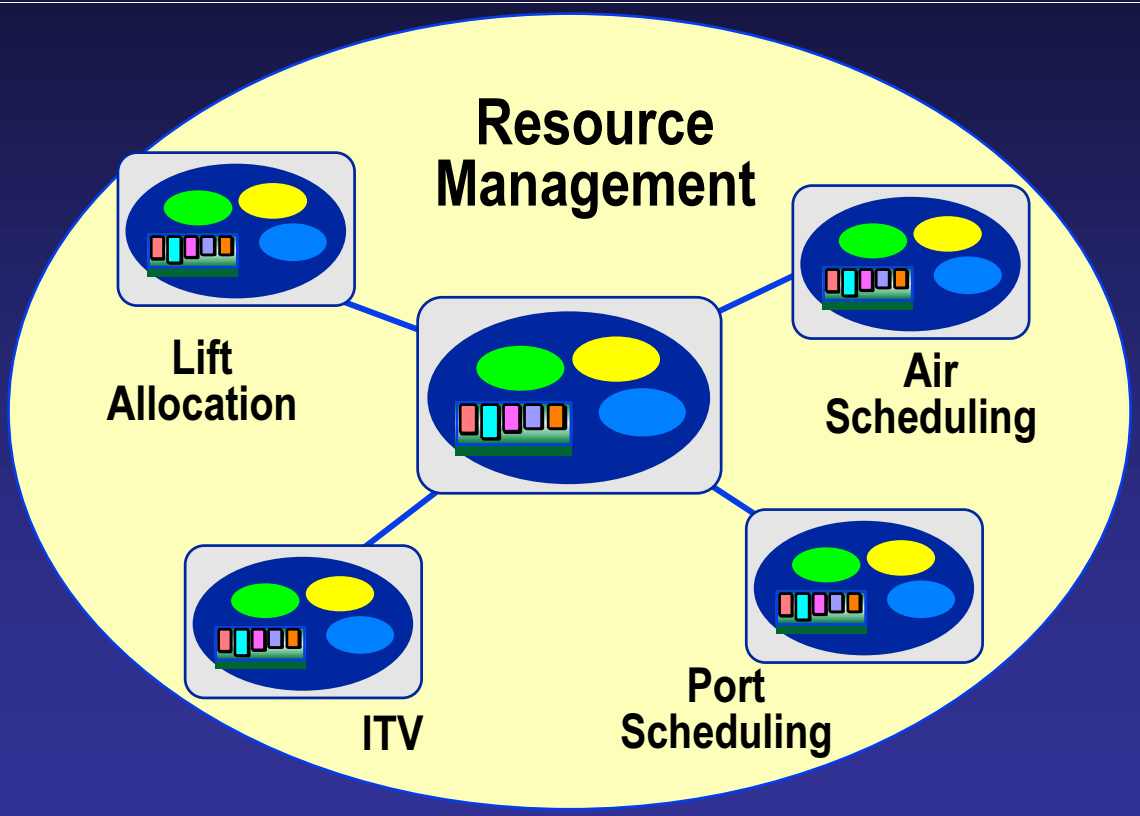
- Continuous System
- Planning and Execution
- Extreme Detail

ALP Agent Cluster



An ALP Community

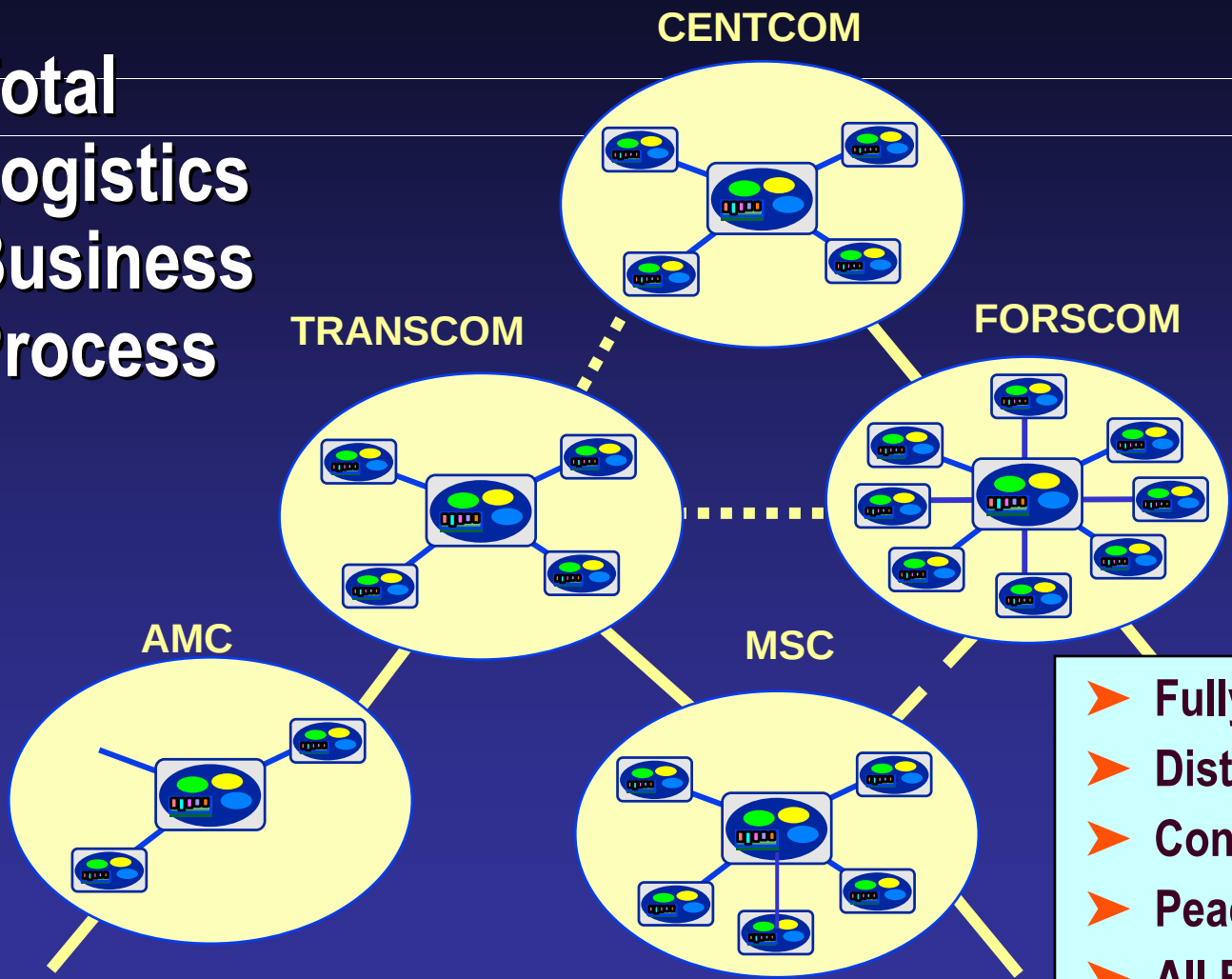
Organizational Logistics Business Process



US Transportation Command

The ALP Society

Total
Logistics
Business
Process



- Fully automated
- Distributed
- Continuous
- Peace and War
- All Echelons

Jan 99 Demo (FY98 Work)

- Distributed logistics planning & execution system
  - 5 Geographic sites
  - Automatic information sharing using the Internet
- Automatic generation of a detailed Logistics Plan
  - Bottom-up demand generation
    - 70+ units and organizations
    - 800+ distinct processes
    - Unit level equipment item detail
  - Live database access (JTAV, GTN, GDSS)
  - Sustainment Support & Transportation schedules for
    - 10,000+ PAX
    - 2836 of the division's 8104 vehicles
    - 36 Tactical aircraft and support equipment
  - Less than an hour

FY 99 Demo (Jan 00)

ISO

- Larger Society
  - 125 Clusters — 7 Geographic Locations
  - 30 unique base plug-ins — 1200 specialized plug-ins
- Larger Force Deployment
  - Army Division / AF AEF Expansion
  - Marine Expeditionary Force
  - Numbered Navy Fleet (partial)
- Planning from installation through TAA
- Emphasis on Execution
  - Monitoring execution against real-time data
  - Sentinels identifying plan deviations
  - Selective replanning to correct deviations

Comprehensive Logistics Picture

ISO

Live Sensor Feeds

Plans

People

Assets

USCENTCOM

Plans

People

Assets

310th Maint Bn

Plans

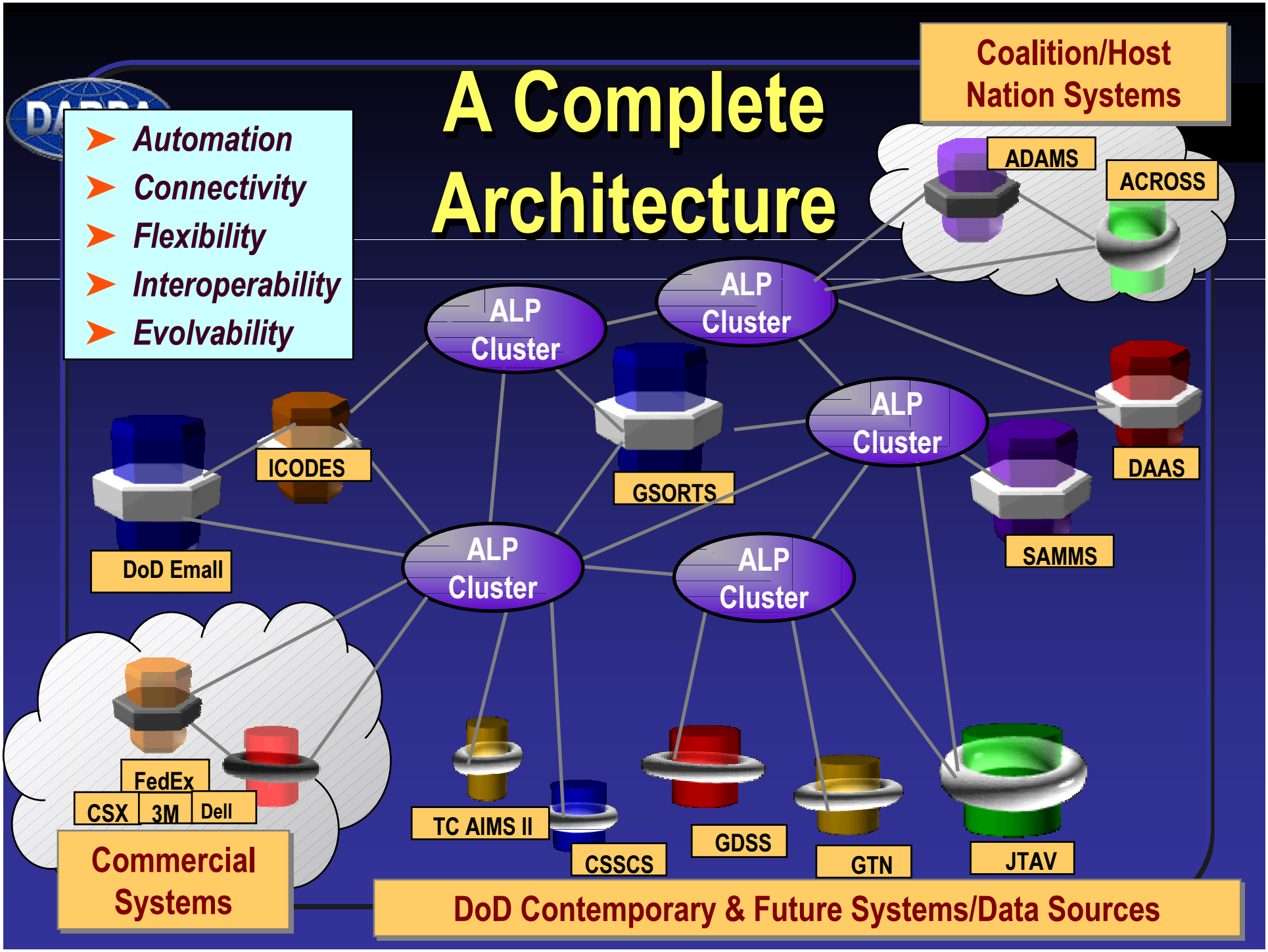
People

Assets

Port of Savannah

Contemporary Data Bases

Integrates organizational plans, assets, real-world sensor data and databases


A Complete Architecture
Automation
Connectivity
Flexibility
Interoperability
Evolvability
Coalition/Host Nation Systems
ADAMS
ACROSS
ALP Cluster
ALP Cluster
ALP Cluster
ALP Cluster
ALP Cluster
ICODES
GSORTS
DAAS
SAMMS
DoD Email
FedEx
CSX
3M
Dell
Commercial Systems
TC AIMS II
CSSCS
GDSS
GTN
JTAV
DoD Contemporary & Future Systems/Data Sources